

Table 17.

strained RFD values: CBM = 4832 wells and Conventional = 4477 wells. All alternatives reflect restrictions that reduce the unconstrained well

RMG Projections	CBM	4832-181=	4651	3.7% reduction
	CONVENTIONAL	4477-183=	4294	4.1% reduction
	TOTAL WELLS		<u>8945</u>	

	New Wells Added ^j	Disturbance				
		Each Well and Road (acres)	Total Well and Roads (acres)	Roads Only (acres)	Roads (miles)	Added Pipeline Activity (acres)
Shallow CBM ^a	4172	3.75	15643	7509	1580	2920
Deep CBM ^b	479	5	2397	863	182	336
Dual CBM ^m						
Intermediate Gas ^c	3400	6.6	22437	6119	1288	2380
Dual Intermed Gas ⁿ						
Intermediate Exploratory ^d	336	14.7	4942	605	127	235
Deep Gas ^e	508	16.1	8178	914	192	356
Deep Exploratory ^f	50	40.5	2035	90	19	35
TOTALS	8945		55633	16101	3388	6262

Average acres disturbed/well=	7	Total Acres Disturbed=	61895
		% of ALT 2=	0.97

RMG Projections	CBM	4832-54=	4779	1.1% reduction
	CONVENTIONAL	4477-59=	<u>4419</u>	1.3% reduction
	TOTAL WELLS		9198	

		Disturbance				
	New Wells Added ^j	Each Well and Road (acres)	Total Well and Roads (acres)	Roads Only (acres)	Roads (miles)	Added Pipeline Activity (acres)
Shallow CBM ^a	4286	3.75	16074	7715	1624	3000
Deep CBM ^b	493	5	2463	887	187	345
Dual CBM ^m						
Intermediate Gas ^c	3499	6.6	23090	6297	1325	2449
Dual Intermed Gas ⁿ						
Intermediate Exploratory ^d	346	14.7	5086	623	131	242
Deep Gas ^e	523	16.1	8417	941	198	366
Deep Exploratory ^f	52	40.5	2094	93	20	36
TOTALS	9198		57224	16556	3484	6439

Average acres disturbed/well= 7 **Total Acres Disturbed= 63663**

RMG Projections	CBM	4832-368=	4464	7.6% reduction
	CONVENTIONAL	4477-309=	4168	6.9% reduction
	TOTAL WELLS		<u>8632</u>	

		Disturbance				
	New Wells Added ¹	Each Well and Road (acres)	Total Well and Roads (acres)	Roads Only (acres)	Roads (miles)	Added Pipeline Activity (acres)
Shallow CBM ^a	3984	3.75	14940	7171	1509	2789
Deep CBM ^b	458	5	2290	824	173	321
Dual CBM ^{cp}	22	0.08	2			
Intermediate Gas ^c	2838	6.6	18730	5108	1075	1980
Dual Intermed Gas ^{cp}	462	0.28	129			
Intermediate Exploratory ^d	326	14.7	4797	587	124	228
Deep Gas ^e	493	16.1	7938	888	187	345
Deep Exploratory ^f	49	40.5	1975	88	18	34
TOTALS	8632		50801	14666	3086	5704

Average acres disturbed/well=	7	Total Acres Disturbed=	56505
		% of ALT 2=	0.8%

RMG Projections	CBM	4832-269=	4563	5.6% reduction
	CONVENTIONAL	4477-218=	4259	4.9% reduction
	TOTAL WELLS		<u>8822</u>	

	New Wells Added ^f	Disturbance				
		Each Well and Road (acres)	Total Well and Roads (acres)	Roads Only (acres)	Roads (miles)	Added Pipeline Activity (acres)
Shallow CBM ^a	4073	3.75	15273	7331	1543	285
Deep CBM ^b	468	5	2341	843	177	32
Dual CBM ^{mp}	22	0.08	2			
Intermediate Gas ^c	2910	6.6	19205	5238	1102	203
Dual Intermed Gas ^{mp}	462	0.28	129			
Intermediate Exploratory ^d	333	14.7	4902	600	126	23
Deep Gas ^c	504	16.1	8112	907	191	35
Deep Exploratory ^e	50	40.5	2018	90	19	3
TOTALS	8822		51982	15008	3158	583

Average acres disturbed/well=	7	Total Acres Disturbed=	5781
		% of ALT 2=	0.9

Estimated Federal CBM wells are: $4832 \times 0.451 = 2179$ wells and estimated Federal conventional wells are: $4477 \times 0.451 = 2019$ wells

RMG Projections	CBM	2179-181=	1998	8.3% reduction
	CONVENTIONAL	2019-183=	<u>1836</u>	9.1% reduction
	TOTAL WELLS		3834	

		Disturbance				
	New Wells Added ^l	Each Well and Road (acres)	Total Well and Roads (acres)	Roads Only (acres)	Roads (miles)	Added Pipeline Activity (acres)
Shallow CBM ^a	1792	3.75	6720	3226	679	1254
Deep CBM ^b	206	5	1030	371	78	144
Dual CBM ^m						
Intermediate Gas ^c	1454	6.6	9594	2616	551	1017
Dual Intermed Gas ⁿ						
Intermediate Exploratory ^d	144	14.7	2113	259	54	101
Deep Gas ^e	217	16.1	3497	391	82	152
Deep Exploratory ^f	21	40.5	870	39	8	15
TOTALS	3834		23824	6901	1452	2684

Average acres disturbed/well=	7	Total Acres Disturbed=	26507
		% of ALT 2=	0.94

RMG Projections	CBM	2179-54=	2125	2.4% reduction
	CONVENTIONAL	2019-59=	<u>1960</u>	2.9% reduction
	TOTAL WELLS		4085	

		Disturbance				
	New Wells Added ¹	Each Well and Road (acres)	Total Well and Roads (acres)	Roads Only (acres)	Roads (miles)	Added Pipeline Activity (acres)
Shallow CBM ^a	1906	3.75	7147	3431	722	1334
Deep CBM ^b	219	5	1095	394	83	153
Dual CBM ^m						
Intermediate Gas ^c	1552	6.6	10241	2793	588	1086
Dual Intermed Gas ⁿ						
Intermediate Exploratory ^d	153	14.7	2256	276	58	107
Deep Gas ^e	232	16.1	3733	417	88	162
Deep Exploratory ^f	23	40.5	929	41	9	16
TOTALS	4085		25402	7353	1547	2860

Average acres disturbed/well= 7 **Total Acres Disturbed= 28261**

RMG Projections	CBM	2179-368=	1811	16.9% reduction
	CONVENTIONAL	2019-309=	1710	15.3% reduction
	TOTAL WELLS		<u>3521</u>	

		Disturbance				
	New Wells Added ¹	Each Well and Road (acres)	Total Well and Roads (acres)	Roads Only (acres)	Roads (miles)	Added Pipeline Activity (acres)
Shallow CBM ^a	1584	3.75	5939	2851	600	1109
Deep CBM ^b	182	5	910	328	69	127
Dual CBM ^m	45	0.08	4			
Intermediate Gas ^c	892	6.6	5888	1606	338	624
Dual Intermed Gas ⁿ	462	0.28	129			
Intermediate Exploratory ^d	134	14.7	1968	241	51	94
Deep Gas ^e	202	16.1	3257	364	77	142
Deep Exploratory ^f	20	40.5	810	36	8	14
TOTALS	3521		18905	5425	1142	2110

Average acres disturbed/well= 6 Total Acres Disturbed= 21015
% of ALT 2= 0.74

RMG Projections	CBM	2179-269=	1910	12.3% reduction
	CONVENTIONAL	2019-218=	<u>1801</u>	10.8% reduction
	TOTAL WELLS		3711	

	Disturbance					
	New Wells Added ^f	Each Well and Road (acres)	Total Well and Roads (acres)	Roads Only (acres)	Roads (miles)	Added Pipeline Activity (acres)
Shallow CBM ^a	1670	3.75	6264	3006	633	116
Deep CBM ^b	192	5	960	346	73	13
Dual CBM ^m	48	0.08	4			
Intermediate Gas ^c	940	6.6	6201	1691	356	65
Dual Intermed Gas ⁿ	486	0.28	136			
Intermediate Exploratory ^d	141	14.7	2073	254	53	9
Deep Gas ^c	213	16.1	3430	384	81	14
Deep Exploratory ^f	21	40.5	853	38	8	1
TOTALS	3711		19921	5719	1203	222

Average acres disturbed/well=	6	Total Acres Disturbed=	2214
		% of ALT 2=	0.7

^bDeep CBM wells are estimated to be 500 of the total CBM wells

^c87% of the estimated 4477^j conventional gas wells are Intermedi-

^d90% of the above intermediate conventional wells are exploratory

^e120% of the estimated 4477 conventional gas wells are Deep Gas

15% of the estimated 4477 conventional gas wells are Deep Gas
 100% of the 1,000 Deep Gas wells are onshore

9% of the above Deep Gas wells are exploratory
in 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673,

^mReservoir Management Group estimates of total wells as adjusted February, 2003

^aDual CBM wells are two wells drilled from the same pad and disturbance figure reflects only an increase in the well pad size

ⁿDual Intermed Gas are two wells drilled from the same pad and disturbance figures reflects only an increase in well pad size

It is estimated that 27% of Alternative 3 and Alternative 4 wells will be drilled in this manner and is reflected

^pConsiders that only Federal wells can be controlled and required to drill a directional well to limit surface disturbance.